

REMARKS

This is in full and timely response to the Office Action mailed on September 7, 2005. Reexamination in light of the following remarks is respectfully requested.

Claims 1-7 are currently pending in this application, with claim 1 being independent. *No new matter has been added.*

Rejections under 35 U.S.C. §103

At least for the following reasons, if the allowance of these claims is not forthcoming at the very least and a new ground of rejection made, then a **new non-final Office Action** is respectfully requested.

Paragraph 1 of the Office Action includes a rejection of claims 1-4 and 6 under 35 U.S.C. §103 as allegedly being unpatentable over U.S. Patent No. 3,011,525 to Randle et al. (Randle) in view of U.S. Patent No. 5,660,210 to Ikeda et al. (Ikeda).

This rejection is traversed at least for the following reasons.

Claim 1 - Claims 2-7 are dependent upon claim 1. Claim 1 is drawn to a power steering hose comprising:

an inner rubber layer,

an outer rubber layer,

at least two reinforcing layers inserted between the inner and outer rubber layers, and

an intermediate rubber layer interposed between the adjacent reinforcing layers, the reinforcing layers composed of twisted cords of organic fibers,

wherein the twisted cords have an intermediate elongation at 0.85cN/dtex of 2.2 to 5.0%, an elongation at break of 8 to 19% and a number of twists of 15 to 30/10 cm, respectively.

Within the claims, *the twisted cords have an intermediate elongation at 0.85cN/dtex of 2.2 to 5.0%, an elongation at break of 8 to 19% and a number of twists of 15 to 30/10 cm, respectively.*

Randle - Randle arguably teaches a high pressure hose having a rubber tube 5, a polyethylene terphthalate braided sleeve 7, a rubber interlayer 8, a rayon braided sleeve 9, and a rubber cover layer 10 (Randle at Figure 1, column 2, lines 56-70).

However, the Office Action admits that Randle fails to disclose, teach, or suggest an intermediate elongation at 0.85cN/dtex of 2.2 to 5.0% or an elongation at break of the twisted cords (Office Action at page 3).

The Office Action contends that “whether the hose is used as a power steering hose or a hydraulic braking hose is not germane to the patentability of the article” (Office Action at page 3).

In response to this contention, please note that Randle arguably relates to “hoses used in *hydraulic braking installations* for vehicles”. A power steering hose is for transferring a high-pressure pulsed fluid flow of which the pressure changes periodically, and it comes under such a hose which is used under a severe condition such that it is easily caused to undergo a fatigue due to periodic variations of a high pressure. Thus, a power steering hose is required to possess such a high-degree of durability which is incomparable with the required durability in the case of a braking-use hose as disclosed in Randle which transfers a simple high-pressure fluid flow free of pulsating.

In addition, Randle fails to contain a reference to a power steering hose.

Ikeda - Ikeda arguably teaches the presence of a tubular rubber layer 1, a lower thread layer 2, an intermediate rubber layer 3, an upper or outer thread layer 4, and a cover rubber layer 5 (Ikeda at Figure 1, column 4, lines 47-54).

Ikeda arguably teaches the presence of the lower thread layer including a polyester, thread having a tensile strength of 8 grams or more per unit denier, an elongation of $10 \pm 1.5\%$,

and a loaded elongation of $2.7 \pm 1.0\%$ per unit denier under 3-gram load (Ikeda at column 2, lines 33-37).

Within the claims, however, the twisted cords have *an intermediate elongation at 0.85cN/dtex of 2.2 to 5.0%*.

Yet, the Office Action has *failed to provide any objective teaching* to show that the characteristics of the at least the lower thread layer found within Ikeda of a tensile strength of 8 grams or more per unit denier, an elongation of $10 \pm 1.5\%$, and a loaded elongation of $2.7 \pm 1.0\%$ per unit denier under 3-gram load are the same characteristics of an intermediate elongation at 0.85cN/dtex of 2.2 to 5.0 found within the claimed invention.

In this regard, no equivalence within the Office Action has been established between those characteristics of the lower thread layer found within Ikeda and the claimed intermediate elongation at 0.85cN/dtex of 2.2 to 5.0.

Within the claims, the twisted cords have *an elongation at break of 8 to 19%*. In this regard, the Office Action fails to show where within Ikeda that this feature can be found. As such, the Office Action is incomplete.

In addition, Ikeda fails to disclose, teach, or suggest a number of twists of 15 to 30/10 cm, as claimed. Specifically, Ikeda is *silent* as to a number of twists.

Ikeda arguably relates to "a layered rubber hose used for passage of a pressurized fluid". Yet, Ikeda fails to contain a reference to a power steering hose.

The intermediate elongation (at 3 g/d) = $2.7 \pm 1.0\%$ recited in Ikeda may reasonably be converted to a value at "0.85cN/dtex", the unit used in the definition of the intermediate elongation in applicant's Claim 1 to find that the converted value is by far below the range of the intermediate elongations of (at 0.85cN/dtex) = 2.2 to 5.0 % defined in applicant's Claim 1, as reviewed below.

First, to convert the load used in the measurement according to Ikeda, "3 g/d", to a value at the "cN/dtex" unit, since the relativity between denier (d) and dtex and that between gf

and cN are that $1d (1/1.111) \text{ dtex}$ and that $1 \text{ gf} = 9.8 \times 10^{-1} \text{ cN}$, we may obtain $\underline{3\text{g/d} = 3.84 \text{ cN/dtex}}$.

Therefore, assuming that the S-S curve of the fiber is linear, the intermediate elongation of Ikeda, (at 3g/d) = $2.72.7 \pm 1.0\%$, may be converted to a value at the unit (0.85 cN/dtex) of the intermediate elongation recited in Claim 1 to obtain an intermediate elongation (at 0.85 cN/dtex) = $0.60 \pm 0.2 \%$.

When compared with (at 0.85 cN/dtex) = 2.2 to 5.0% , the intermediate elongation defined in Claim 1, the above found intermediate elongation value, (at 0.85 cN/dtex) = $0.60 \pm 0.2\%$, is seen to be considerably small or low.

Where the intermediate elongation (at 0.85 cN/dtex) of a twisted cord used in a reinforcing layer is so low above, with a power steering hose made with use of such twisted cord it is impossible to attain such a remarkable durability as attained according to the claimed invention.

Thus, the Office Action has failed to show that Randle and Ikeda, either individually or in combination, would result in the claimed invention.

Paragraph 2 of the Office Action includes a rejection of claims 5 and 7 under 35 U.S.C. §103 as allegedly being unpatentable over Randle in view of Ikeda and further in view of U.S. Patent No. 5,371,153 to Kuribayashi et al. (Kuribayashi).

This rejection is traversed at least for the following reasons.

Claim 5 - Claim 7 is dependent upon claim 5. Within claim 5, the twisted cords have a double-twist structure in which a plurality of primary twisted cords is twisted together with final twists in a same twist direction of the primary twisted cords.

Randle and Ikeda - The reasons for the traversal of these is provided herein above.

Kuribayashi - Kuribayashi arguably teaches polyamide fibers.

Nevertheless, like Randle and Ikeda, Kuribayashi fails to disclose, teach, or suggest twisted cords having an intermediate elongation at 0.85cN/dtex of 2.2 to 5.0%.

Kuribayashi also fails to disclose, teach, or suggest twisted cords having an elongation at break of 8 to 19%.

Moreover, Kuribayashi fails to disclose, teach, or suggest twisted cords having a number of twists of 15 to 30/10 cm.

The Office Action contends that it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to select a double-twist structure as the twisted cords of Randle and Ikeda depending upon the intended end result of the hose since double-twist structures are well-known and substitutable twist structures for twisted cords used in formation of braided reinforcement layers for rubber hoses, and taught by Kuribayashi.

In response to this contention, the twisted cords having a double-twist structure are absent from within Kuribayashi.

"Allegations concerning specific 'knowledge' of the prior art, which might be peculiar to a particular art should also be supported and the appellant similarly given the opportunity to make a challenge." (Citations omitted). *In re Pardo and Landau*, 214 USPQ 673, 677 (CCPA 1982). Moreover, the procedures established by Title 37 of the Code of Federal Regulations expressly entitle the Applicant to an Examiner's affidavit upon request. Specifically, "when a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons." 37 C.F.R. §1.104(d) (2).

Accordingly, Applicant hereby requests a reference or an Examiner's affidavit to support this officially noticed position of obviousness or what is well known.

Further note that if this reference or Examiner's affidavit is not provided, the assertions of what is well known must be withdrawn. See M.P.E.P. §2144.03.

Also note that the failure to provide any objective evidence to support the challenged use of Official Notice constitutes clear and reversible error. *Ex parte Natale*, 11 USPQ2d 1222, 1227-1228 (Bd. Pat. App. & Int. 1989).

Withdrawal of this rejection and allowance of the claims is respectfully requested.

Conclusion

For the foregoing reasons, all the claims now pending in the present application are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of the amendments and remarks is courteously solicited.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone Brian K. Dutton, Reg. No. 47,255, at 202-955-8753.

If any fee is required or any overpayment made, the Commissioner is hereby authorized to charge the fee or credit the overpayment to Deposit Account # 18-0013.

Dated: February 7, 2006

Respectfully submitted,

By 

David T. Nikaido

Registration No.: 22,663

Brian K. Dutton

Registration No.: 47,255

RADER, FISHMAN & GRAUER PLLC

1233 20th Street, N.W.

Suite 501

Washington, DC 20036

(202) 955-3750

Attorneys for Applicant